

FUTURE OF FISHING: CATCH SHARES, CATCH LIMITS, AND BEYOND—A WAY FORWARD?

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THE FISHERY MANAGEMENT SYSTEM IS BROKEN!

Groundfish management in New England changed radically on May 1, 2010. At that time the days-at-sea system was replaced by the catch-share system. Days-at-sea management resulted in a relatively small number of days fishing per boat, gross underfishing as well as overfishing, and exceeding some quotas. This was not satisfactory, so alternative management structures were proposed. As discussion progressed, NOAA directed the New England Fishery Management Council to implement catch-share management.

The catch-share system has been in operation for six months. Unfortunately, it does not appear to be an improvement over the unsatisfactory days-at-sea system. Success has been measured by proponents in terms of revenues which are slightly greater than last year. However, this is an incomplete index. Revenues do not take into account substantial added costs of the catch-share system that include, among other things, the uncertainty of lease costs, sector management and administration, and the cost of additional equipment. Ignored, as well, are social costs induced by laying off crew when quota is exchanged.

There is no available analysis by NOAA on the performance of the new system, but it does appear that the catch-share system has generated an economic crisis. The economic crisis was spelled out in a recent letter from Governor Patrick to the secretary of commerce. The governor's letter pointed out that, of the 385 boats that have joined sectors, nearly 60% have not fished this year. Two-thirds of the fishing permits were allocated only 50-60% of their 2007-2009 harvest. Ten percent of Massachusetts sector boats landed 65% of the total revenue, while 90% of the boats landed 35% of the total revenue. Projecting this trajectory to the end of the fishing year places the crisis in bold relief as we translate these dry statistics into lost livelihoods and collapses of small businesses.

One of the most striking features of the comparison between the days-at-sea system and the catch-share system is the failure of the catch-share system to eliminate gross underfishing. Under the days-at-sea system, only 30% of the total allowable catch (TAC) was landed. This wasted \$280 million each year. Under the catch-share system we project that the fishery will continue to catch only 30% of the TAC. (The absolute waste will be less because the TACs are much lower.)

Much of this waste is due to regulations that impede the catch of haddock. NOAA had the opportunity to eliminate underfishing of haddock by applying the "mixed stock exception." It did not take advantage of this opportunity and, as a result, we anticipate that the loss from the 2003 year class of haddock alone will amount to roughly \$1 billion given the present management structure.

SO HOW DID WE JUMP FROM THE FRYING PAN INTO THE FIRE?

Wrong Fundamental Premise

It is important to keep in mind that catch-share systems by themselves do not conserve fish or prevent overfishing. They are simply economic alternatives to allocate public resources to private individuals or entities. The theoretical benefits of a catch-share system are based on a narrow economic view that does

not take into account the entire fishing sector, benefits to the consumer, welfare costs to tax payers, increased management costs, and compensation to those who are deprived of their livelihood. Certainly if these costs are ignored, then, yes, adopting a system that tends to concentrate market power in the hands of a few may on some level be economically efficient. But what about the effect on the many losers that are winnowed from a fishing livelihood? While the catch-share system as adopted may generate some benefits, it is not clear that these benefits are outweighed by the multiplicity of associated costs, or that the benefits are appropriately and equitably shared.

Lack of Planning and Analysis and Premature Implementation

It is striking that this major federal action was put into place prematurely without the level of analysis, planning, budgeting, and community dialogue that would be expected with a major federal action. It turns out that reasonable alternatives were not considered. A greater surprise is that the economic and social performance of the catch-share experiment is not being tracked by NOAA. It appears that NOAA has committed itself to the belief, put forth by conservation organizations, that catch shares are the magical cure to all ills, real or imagined.

Flaunting the Intent of Congress

If one reads the plain language of the Magnuson-Stevens Act, one is immediately struck by the extent the catch-share system departs from the intent of congress.

First, the Magnuson-Stevens Act states no ... “[conservation and management measure] shall have economic allocation as its sole purpose” (Sec. 301(a)(5)). Yet it is difficult to consider the catch-share system as having any function other than economic allocation as its sole purpose. Second, the Magnuson-Stevens Act states that no individual fishing quota shall be instituted in New England without a referendum. Yet NOAA evidently used catch-share semantics to avoid a referendum. Third, the congress made the analysis of alternatives a center piece in the National Environmental Policy Act. Yet the implementation of Amendment 16 was not based on a portfolio of meaningful alternatives. Fourth, National Standard 8 directs NOAA to take into account “... the importance of fishery resources to fishing communities by utilizing economic and social data ...” Yet, as is particularly obvious now, this has not been done. And fifth, National Standard 4 affirms fair and equitable allocation. Yet there are several seemingly valid disputes concerning whether initial allocations were fair and equitable.

Inflexible Interpretation of Scientific Calculations

It is clear that the overfishing level (OFL) that determines the annual catch limit (ACL) is too risk averse because uncertainty has been artificially, and unnecessarily, induced in the OFL. Instead of using maximum sustainable yield (MSY) criteria as specified in the Magnuson-Stevens Act, the stock assessments use proxies or substitutions for MSY. It has been shown in the literature that these proxies are conservative, particularly those with a domed shape stock and recruitment curve. It has been further shown that many stocks are sustainable at much lower levels of average abundance than 40% spawning stock biomass, the level of biomass upon which the proxy is based.

Support for the claim that assessments are “best available science” is often based on the fact that the assessments are “peer reviewed.” This is not a good argument because many assessments are changed or shown to be in error after they have been accepted via the peer review process. Furthermore, the results of a peer review process depend on the questions asked. If the wrong questions are asked of peer reviewers, then outcomes may be preconditioned, or biased toward certain outcomes.

It is particularly pertinent to observe that a less rigid and more realistic interpretation of stock assessment results might have lessened the dissatisfaction with the days-at-sea system and moved us more gracefully into a more innovative approach than the particular catch-share system that was adopted.

STRATEGIC STEPS FORWARD

- 1) We need a level playing field on what is really happening and what is likely to happen. There is too much at stake to rely on partial answers, suppositions, and false scenarios. Where is the hard analysis of what is happening?
- 2) We need to maximize economic survival of participants during the first year by relaxing ACLs without overfishing.
- 3) We need to develop a process to compensate those who have been unfairly or illegally harmed by the catch-share system.
- 4) We need to implement major programs of cooperative research.
- 5) We need to facilitate and accelerate restructuring of the fishery management process in New England, including data collection, stock assessment, and delivery of information to stakeholders. Special emphasis needs to be placed on flexibility and the mixed-species nature of our fisheries.
- 6) An independent commission needs to be empanelled to monitor the progress of the restructuring. The commission should report to congress.

MAKING IT HAPPEN

Congressman Frank, Congressman Jones, Governor Patrick, Mayor Lang, and Mayor Kirk are pushing toward rationalization of the fishery management process. The governor has written to the secretary of commerce with specifics on how the secretary can apply his emergency powers. The mayors of New Bedford and Gloucester have urged the inspector general to extend his investigation of law enforcement to also take into account rule making. Litigation is on the table. The message is loud and clear. The ball is in the secretary's court.